

# ABSTRACT OF THE DISCLOSURE

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An optical fiber is fabricated ~~provided~~ with a refractive index profile having a central core; a middle part provided around the outer periphery of the central core and having a lower refractive index than that of the central core; and a cladding provided around the periphery of the middle part and having a higher refractive index than the middle part and a lower refractive index than the central core. This optical fiber has an effective core area of  $120 \mu\text{m}^2$  or more in an employed wavelength band selected from the range of  $1.53\sim 1.63 \mu\text{m}$ , and has a cut-off wavelength that is capable of substantially single mode propagation in the aforementioned employed wavelength band. As a result, it is possible to construct an optical transmission system having excellent transmission characteristics in which nonlinearity ~~are~~<sup>is</sup> decreased.

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